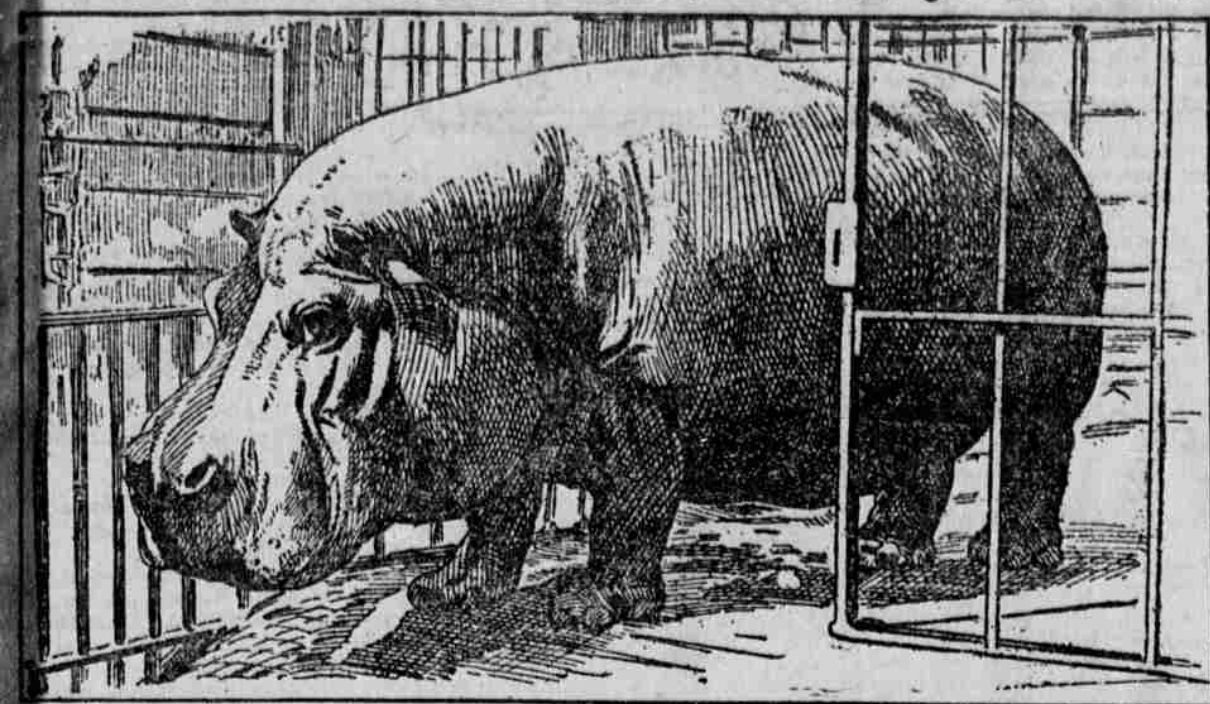


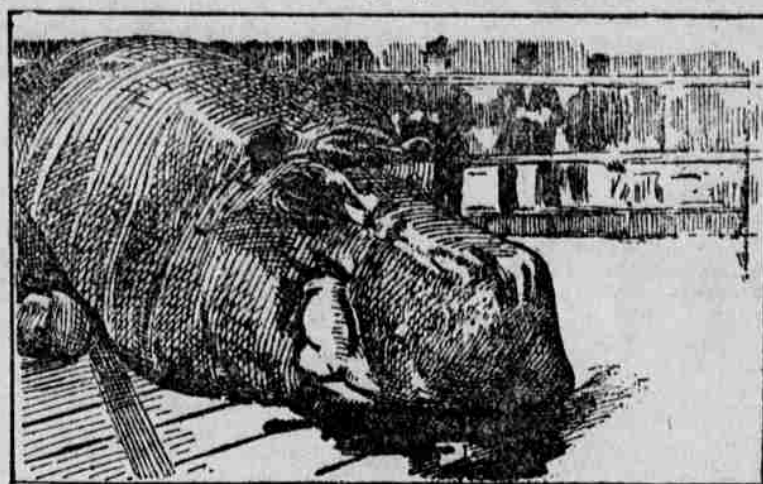
Captured Hippopotami Now in Central Park Zoo, New York



"Caliph" the Giant Hippopotamus of the Central Park Menagerie, New York City.

While few menageries or zoological gardens include hippopotami among the members of the animal world which they contain, the general public is nevertheless quite familiar with the appearance and characteristics of the great ungulates. They have been described in word and picture by innumerable naturalists, historians, and writers, even of the earliest times. We find unmistakable reference to them in the records of the ancient Egyptians, and to-day there is little doubt that the behemoth of the Bible was identical with the hippopotamus. The Central Park Zoo of New York City, is particularly fortunate in the possession of three splendid specimens, a pair of older animals and a young one. The pair, Caliph and Miss Murphy, are well known, not only to those directly interested in these matters, but also to the reading public, for the huge brutes have been described and pictured in various publications.

Caliph, the great male which is the subject of the accompanying interesting engravings, has been in the Central Park Zoo since 1889, while his mate, Miss Murphy, has been included in the collection for a somewhat shorter period. These two have proven remarkably prolific, and have presented an admiring public with eight healthy offspring, and these, with the exception of the young one at present in the Park, have been sold to other menageries. This is not an exceptional case, as hippopotami thrive well in captivity, and breed not infrequently. Were it not for the difficulty formerly experienced in securing original pairs, they would have been far more common in zoological parks. Needless to say, it is very difficult to capture the hippopotamus in a wild state and transport the animal uninjured to civilization,



"Caliph" Musing.

though if this be accomplished successfully, he takes kindly to captivity, and often lives contentedly for many years. In fact, a single specimen existed in the Zoological Park in London for over twenty-eight years.

Hippopotami in captivity do not require the excessive care and attention which are usually necessary for the well-being of tropical animals. One factor which is of considerable advantage in this respect is the fact that the animals lack the restlessness and nervousness so commonly found in wild creatures. Though terrible fighters if aroused they are even-tempered and fairly intelligent, and learn to obey the word of command of their keepers. They appear to appreciate kindness and seldom if ever require punishment.

Hippopotami are purely herbivorous, and in the wild state feed upon grasses and various water plants, rice, millet, maize, and similar growths. This diet is approximated as nearly as possible

in captivity. They are fed every day, usually early in the afternoon, on fresh grass or hay, various vegetables, and bread. They have very healthy appetites, and one can imagine the quantity of food that a "hippo" can consume, when one considers that the stomach of a large specimen will measure as much as eleven feet in length.

The hippopotamus is heir to few troubles. Natural attrition keeps his teeth, which grow throughout his lifetime, within proper bounds. As he not only spends most of his waking hours in the water, but often sleeps there also the frequent immersions keep his thick skin in a healthy condition. The water must have a temperature of not less than fifty-five degrees, and must be maintained at this point the year around. With the exception of the usual attention regarding the cleanliness of the habitation, other necessary care includes merely the preparation of his food and the regulation of the temperature.



Agricultural Progress.

The census of 1850 gave the number of farms at 1,449,073. In that year New York reported 170,621, the largest number of any state. Only two other states reported over 100,000. They were Ohio, with 143,807, and Pennsylvania, with 127,577. In 1900 the aggregate number of farms in the United States was 5,739,657, an increase in fifty years of 4,290,584 farms. The same period witnessed an increase in national population of 23,191,876. In 1900 fifteen states reported over 200,000 farms each, as follows: Texas, 352,190; Missouri, 284,886; Ohio, 276,719; Illinois, 264,151; Kentucky, 234,667; Iowa, 228,622; Tennessee, 224,623; Pennsylvania, 224,248; Alabama, 223,220; Indiana, 221,897; Mississippi, 220,803; Michigan, 203,261. The total increase in acreage has been from 293,000,000 acres in 1850 to 841,000,000 in 1900.

The increase in value of farm property during fifty years is shown by the following census reports: 1850, \$3,967,000,000; 1860, \$7,980,000,000; 1870, \$8,944,000,000; 1880, \$12,180,000,000; 1890, \$16,082,000,000; 1900, \$20,514,000,000. The average value per farm for each census year was as follows: 1850, \$2,738; 1860, \$3,904; 1870, \$3,363; 1880, \$3,038; 1890, \$3,523; 1900, \$3,574.

In 1850 only eight states reported farm land to the value of \$100,000,000 or over. In 1900 there were seven states each with farm land worth \$800,000,000 or over.

In 1850 little farm machinery was in use. Cast iron plows were about the only plows to be found on the farms. Grass was mowed with a scythe and grain was cut with the scythe, sickle or cradle. The threshing implement was the flail. Since that time almost innumerable farm implements have been patented. The value of all farm implements (including wagons and carriages) in 1850 was \$151,000,000. By 1880 this value had increased to \$406,000,000. In 1890 the value was \$494,000,000, and in 1900 it was \$761,000,000. The increased use of farm machinery has been largely the cause of the enormous increase in agricultural wealth.

A Good Rotation.

The rotation of crops has come to be regarded as one of the necessities of keeping up the condition of the farm. Where farm animals are not kept in considerable numbers, the growing of one crop is sure to reduce the fertility of the farm. Therefore the growing of several crops is advisable. One of the best rotations for the general farmer in Illinois and like states is that consisting of corn, cow peas, wheat and clover. It always pays for the general farmer to have a few cows to assist him in the rotations of the crops by pasturing off the crops that can be pastured. With the rotation above mentioned, the cow peas can be sown in the corn at the time of the last cultivation. These will make a good growth and being legumes will add to the soil a considerable portion of nitrogen. After the corn is harvested the cows can be turned into these peas which will still be green and can be fed upon them until the frost comes. Farmers that turn their cows in upon the corn stocks would find it safer to have a supply of cow pea foliage, that the animals may eat of both at the same time. Heavy losses have been occasioned by pasturing of the dry corn stocks. The cow peas may be turned under in the late fall or in spring and wheat sown. If the wheat is sown in the fall immediately after plowing the clover seed can be thrown upon the land at the end of winter, while the snow is still on the ground. If spring wheat is to be sown the clover can be sown with it. This will give a crop of corn, a crop of cow peas, a crop of wheat and the next year following the wheat a crop of clover and clover seed. The clover sod can then be plowed under and corn again put on. This will keep the land rich in nitrogen and necessitates only an occasional buying of some form of phosphate.

The Presence of Whitetop.

While visiting Odia, Ill., last year, and inspecting some of the meadows around that place, the writer was talking with Professor Hopkins relative to the presence of whitetop, which seemed to have taken many fields. Professor Hopkins made the remark: "Whitetop never troubles in the clover meadow."

He had a demonstration of this at hand, for one of the fields under his control was an immense meadow of red clover that stood twenty-four inches high. The whole field was a mass of green leaves and red blooms, and if there was any whitetop there it was out of sight. One of the farmers remarked that his brother's farm was so overrun with whitetop that the hay was of little value. Whitetop is a great pest where it is allowed to get the upper hand of the farmer, but if a field is well cultivated and the clover crop established, no whitetop will appear.—Farmers' Review.

How Much Clover Seed Per Acre.

It requires in the neighborhood of 15 pounds of clover seed to give the best results in the sowing of land devoted to the growing of clover only. If it is to be seeded with a nurse crop, less clover seed will be needed. It is usual to seed on the snow above the wheat field that is already green with the wheat sown in the fall. In such a case eight pounds of clover seed should be enough.



Grapes.

As a popular fruit the grape stands next to the apple. When a man buys a package of apples or grapes he generally knows what he is getting. Grapes on the Chicago market are of a more uniform character than any other fruit. During the fall months baskets of grapes are sold by the thousands, daily, and almost always the buyers are satisfied with them. This year they have been quite high from the consumers' standpoint, this being due more to the fact that there has been a big demand for them than to any shortage of supplies.

Grapes are grown over a very wide range of latitude, and every year new vineyards are planted. It is now estimated that the area in grapes is in the neighborhood of half a million acres. California is the great grape grower, and that state grows about as many grapes as all the rest of the United States put together. The largest single area planted to grapes is that known as the "Lake Shore Grape Belt" in New York and Ohio. This begins at Brocton in New York, and extends to Sandusky in Ohio, and is limited on the north by Lake Erie. On the south it extends to Lake Champlain. In this region nearly all of the farmers are engaged in the growing of grapes. The railroads are able to furnish the growers with the best of shipping facilities, and every day during the grape-growing season whole train loads of grapes go east and west toward the great cities, where most of the grapes are consumed.

At the present time there are hundreds of varieties of grapes being grown in this country. They are, however, descended from four chief families: *Vitis labrusca*, known also as the Fox grape; *Vitis aestivalis* (summer grape); *Vitis cordifolia*, sometimes called the Frost grape, and *Vitis vinifera*, the kind generally grown in Europe. There are quite a number of other species, but none that have amounted to very much in cultivation. The entire grape growing industry has grown up in about 85 years. In 1820 no more than two varieties of the grapes now grown were known here. The greatest advance has been made within the past 50 years. Some of the new grapes have been produced by hybridization, but the most progress has been made by cultivating chance seedlings. In this way originated the Concord grape, the most famous and most valuable grape grown in the United States east of the Rocky mountains.

Pick Off Caterpillar Eggs.

When the trees are bare is the time to hunt the caterpillar eggs and remove them from the branches. If this can be done in December, it should be done at that time, because the days are mild, and a boy can climb about the tree tops without being exposed to the cold winds that will interfere with the work later in the winter. The eggs will be found in clusters or rings about the twigs and smaller branches. They are easily recognized, and cutting them out will prevent the appearance of the colonies next spring. The sooner the work is done the more certain will the orchard owner be that the clusters of eggs will not be forgotten. Next spring there will be a great many things to do, and it is very easy not to find time then for work of this kind.

Laying Down Peach Trees.

In some parts of the west the laying down of peach trees is being practiced on a considerable scale. A hole is dug around the tree and this hole is filled with water. This softens up the ground and the trees can then be bent at the roots. They are laid down till almost level with the ground. Some coarse material, like gunny sackings, is thrown over them, and over this is piled the earth. In the spring, after the danger of hard freezes is past, the trees are taken out of their protection. This must be done before growth starts. The trees, when righted, have to be propped up and kept propped throughout the season. The results have been very good so far, and much is hoped for from the experiments carried on.

Cave Stored Fruit.

A writer on the storage of apples for winter keeping says that the digging of a cave for the winter storage of fruit is feasible and is often practiced in some parts of the country, but that certain things have to be carefully observed, to make the practice a success. The cave should be dug in clean dirt and in a place that will receive no drainage and no seepage. Sand or gravel is best of all. The cave should have a southern exposure, so that the frost-line will be less deep. The top of the cellar should be just below the frost-line. Little wood or vegetable matter should be present. No hay or straw is needed. The apples should not be piled too high or the lower ones will be bruised. Such a cave must be built so it can be entered at will.

Looks out for mice in the orchard. They will prove very destructive to the young trees after the snow comes.

Branches that are trimmed from fruit trees should not be left on the ground, but should be burned.

"Ineptitude" is the most unusual word to apply for.



When to Aerate Milk.

For a great many years an opinion prevailed that the aeration of milk was a necessity. It was believed that in the milk was some kind of an animal odor that could only be taken out by exposing the milk to the air. In the factories where the cream was handled for butter-making or milk for cheese-making, large aerators were used in some cases. More often, however, this was done in bottling plants that supplied milk to adjacent cities. The milk was run over coils in which circulated brine or ice water. On the farms the aeration was done by taking the milk out of doors and pouring it from one pail to another or stirring it with a great ladle. While aeration is still practiced to some extent, it is not practiced to the extent it used to be. Especially is this true on the farms. Among the better class of butter-makers there is at the present time about as much opinion against aeration of milk as there is for it. The old idea of animal odor in the milk has about been dissipated, and it is concluded by some of the deepest thinkers and experimenters that the so-called animal odors were impurities arising from outside sources. When the milk is properly protected from all impurities, there is no danger of there being animal odor in the milk. Therefore the need of aeration does not exist. We believe, however, that in some cases milk should be aerated, because we are conscious of the fact that in many stables odors do get into the milk. Milk absorbs odors, as do many other kinds of food products. If we believe that odors have been taken into the milk and there is a good place in which to aerate the milk, it should be aerated. The winter season gives purer air for this than the summer season.

Stringy Milk.

Now and then a farmer is puzzled at the appearance of stringiness in the milk a few hours after it is drawn. He at once imagines that the cow is sick or that some certain cow has given this milk and begins a hunt for her. Sometimes the stringiness is due to a case of garget, but in most cases it is due to less important causes. There are certain growths of a minute nature, found sometimes in the pastures but often in the hay, that produce this stringiness. There is only one way of getting rid of it, and that is by excessive care when the milk is drawn. Generally the trouble begins with the stirring up of the hay before milking, and the filling of the air around the cow with a vast number of particles that have in them the power of development. In developing in the milk these attach themselves one to the other and make the white strings so annoying. When the thing occurs persistently in the stable, it is probable that these spores exist in great numbers in the hay. We can only advise in such cases that the hay be not given the cows until after the milk is drawn and taken away.

To Secure the Best Cows.

The practice with regard to the maintenance of dairy herds in this state is varied. Some of our farmers try to breed their own herds, saving the calves from the best cows, and thus, by a process of indirect selection, improve the annual yield of milk and butter from year to year. Many of our farmers buy cows as they need them, disposing of those that have proven unprofitable to the local butcher. While dairying is a growing industry in Virginia, it has not made as much progress as the legitimate prices obtainable for milk, butter and other dairy foods would seem to warrant. There is an increasing desire for information along dairy lines, and our farmers are beginning to realize that they must have better cows, and one of the most certain ways to secure these is through breeding them themselves.

Andrew M. Soule,
Dean Agricultural College of Virginia.

The Unpedigreed Dairy Cow.

Some of our very best cows are those that have no pedigrees; in fact, the greater number of cows now in the dairy are of this class. Such men as H. B. Gurler say that they pay no attention to breed when going to select a cow. They simply pick the best cows they can find, judging by the usual marks of the dairy cows. A man can go through the country and on multitudes of farms find cows that give large quantities of milk rich in butter-fat, and yet of no known breed. These cows, though having no pedigrees, are not scrubs. They are the best kind of foundation stock for the development of the common dairy herds of the country. Many of them are worthy to receive more attention than they have received at the hands of dairy experts.

Rusty Cans.

No rusty cans should be used for the holding of milk. Rust soon creates a sponge-like, honey-comb condition in the texture of the iron and in these cells the casein lodges. If hot water is used, it merely coagulates the casein, and if cold water is used, it does not remove all of the casein, which is in turn coagulated when hot water is placed in the can after the cold water. Only the best kind of tin should be bought, and that should be so carefully handled that rust cannot start. When the can begins to rust, its usefulness for the carrying of milk is at an end.

Country Editor's Day of Triumph

Very likely you have not heard of Chula, Mo. This is not strange, because Chula has but recently been placed upon the maps of a state whose citizens insist upon being "shown" and who refuse to give proper cultivation to their credulity.

It is not exactly correct to say that Chula has been placed upon the maps, for on one bright red-letter day in its history it was thrown upon the maps in a bright red blotch by a country editor. This editor came to the city the other day as the guest of the St. Paul railroad. He occupied an entire drawing-room car, ate rich food and drank sparkling wines and received adulations from the colored porter all the way from Chula and back again at the expense of a "soulless corporation."

The man who compelled the map-makers to take notice of Chula enjoys the most uncommon name of Smith E. H. Smith.

Smith's great opportunity came when the St. Paul put the Southwest Limited train into service between Chicago and Kansas City. The train passes through Chula on its eastward and westward flights, and there were things about it that made a great impression upon Smith's imagination. He watched the flight of the Southwest Limited as it tore great holes in the atmosphere of Chula, and then wrote this about the train:

"The new train on the Chicago, Milwaukee and St. Paul railway passed through Chula for the first time Sunday night, about three hours after dark. There was no hesitation at Chula town, at least none perceptible. There are no high places in Chula town, hence we question whether she ever touched the track. She just ripped a great fiery hole in the darkness and left the atmosphere heated steam for a second, then whistled for Niantic or Chicago, we are not certain which. If 'Central' had not been closed, we would have telephoned to Chicago to see if she hadn't run clean through the Union station. She is sure not a hurry-up train." Chicago is only about three miles up the track now. She is a gleam of summer sunlight, vestibuled and electric lighted from the cowcatcher clear back a hundred yards behind the last coach. She is knee deep with velvet carpets, and her cushions are as soft as a girl's cheek. She is lighted to a dazzle and heated to a frazzle. She was built to beat the world and her gorge-

ous splendor makes us chuckle to think we have a pass on her. She goes so fast that the six porters look like one big fat nigger. She is called 'The Southwest Limited.' She stops, going both ways, at Chillicothe, and you can get on her there, but you'll have to hurry."

In the gratitude of his heart the general passenger agent wrote the poet-editor that whenever he desired to come to Chicago he would be most pleased to cause the Southwest Limited to pause long enough at Chula to take him on and again to let him off. The offer was accepted by wire, as Editor Smith does not believe in toying with fortune nor flirting with opportunity. Then he wrote a piece for his paper, as everything that happens, if anything does happen, in Chula is news, and told the citizens that he was going to Chicago on the limited and as the guest of the general passenger agent and of the road.

As might be expected, the entire business of Chula was suspended the following day and every man, woman and child not bedridden was down to the depot bright and early. The Chula band in full uniform was there playing suggestive pieces about conquering heroes, and Chula's mayor revised his last Fourth of July "oration" to fit the occasion. It was a gala day for Chula, and the editor had to tell them by becoming modestly how he had achieved greatness.

About the time he reached the spread-eagle stage of his address there was a long, mournful wail pitched in a minor key which sounded like the expiring war whoop of an Apache Indian. It was the Southwest Limited hailing Chula, Mo. Editor Smith grasped his new \$2.75 suit case firmly by both straps and waited, all a-tremble with excitement. The band began a furious fanfaring and the citizens of Chula held their breaths. There were two more long wails, followed by two short ones, as the limited's mogul swept down upon Chula's only grade crossing, a cloud of blinding dust, an answering "toot" to the tower man as he dropped the semaphore indicating a clear track and a faint moan was borne upon a passing breeze to Smith and to Chula's population as the mogul whistled for "Niantic or Chicago, which?"

Smith, standing disconsolate with grip in hand, and with Chula's population gazing seemingly with a million eyes clear through him, didn't care

much which it was. Without so much as a look at his fellows the Chula News' editor turned and hastened to his sanctum, where he sent a telegram which read: "When it comes to four flushes there are others."

Needless to say that it was all a mistake. The general passenger agent apologized by wire, the limited did not forget to hesitate at Chula the following day. And thus was Chula, Mo., placed upon the map.—Chicago Record-Herald.

Thinks They Are Safe.

In the spring term of the past year the athletic young women of Smith college developed a passion for baseball. In conversation with a distinguished visitor at the college, President L. Clark Seelye spoke of the fresh enthusiasm which the students were manifesting in the national game. The visitor, having his own ideas of intelligent gentleness, looked somewhat distressed at this announcement.

"Aren't you afraid," he asked, "that baseball will have a tendency to make the girls masculine?"

A humorous expression stole over President Seelye's face. "Masculine?" he echoed. "My dear friend, if you could never have further fears pitching the ball you would never have any further fears on that score."

Simeon Was Given No Choice.

Amos Saunders of Rowley, Mass., once employed a boy to turn the grindstone for him. The boy turned until he was tired and then stopped.

"Turn, Simeon, turn," commanded Mr. Saunders.

"I can't; I'm tired," was the reply. "Turn, Simeon; turn or die," thundered Saunders.

"I'll die, then," said Simeon. "You can't have your choice," returned Saunders; "turn, Simeon, turn."

Ju-Jitsu Champion.

The champion ju-jitsu (not ju-jitsu) wrestler of Japan offers \$5,000 to any man who will come forward and defeat him. This is no betting matter. The opponent puts up no stake. Tarro also promises \$100 to any man he fails to defeat in ten minutes, and \$5 a minute to any one who stands before him five minutes without being forced to acknowledge that he had been "beaten" in the struggle.—New York Press.